IRG/WP 10-20458

THE INTERNATIONAL RESEARCH GROUP ON WOOD PROTECTION

Section 2 Test Methodology and Assessment

Improved analysis of field test data related to service life prediction of tropical wood species

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Paper prepared for the 41st Annual Meeting
Biarritz, France 9-13 May 2010

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Stockholm Sweden
www.irg-wp.com

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ABSTRACT

Long-term field trials of wood in ground contact give valuable data on the natural durability of the material. The European Standard EN 350 gives guidance on how to perform these durability classification, but is limited to the use of averages of in-service life of a set of specimens compared to a reference set. Starting from a database of visual assessment of field stake testing, it is possible to obtain a durability classification based on Weibull distributions and accompanying percentiles. For this study a set of 39 Malaysian timber species, exposed for up to 30 years, is used. The in-ground durability of the stakes was tested and decay was rated according to ASTM D1758. Weibull statistics and the approach as applied in EN 350 standardization are compared. By taking into account the use of reference specimens, these classifications could be transferable to other climatic regions in order to harmonise durability and with the ultimate goal to get general applicable statistical data on durability, going beyond classification, and related strength with regard to the biological nature of wood..

Keywords: Natural durability, Weibull statistics, EN 350**,** Malaysian hardwoods